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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,381	07/02/2003	Homa Afjeh	02-363	3692

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EXAMINER

RIDDLE, KYLE M

ART UNIT PAPER NUMBER

3748

DATE MAILED: 03/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/612,381

Applicant(s)

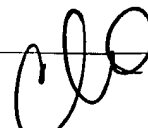
AFJEH ET AL.

Examiner

Kyle M. Riddle

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 07022003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "76" has been used to designate both fluid line from reservoir to pump and fluid line from pump to galley (see page 8, paragraph 31). It appears from the specification that the topmost "76" should read --77--. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: Page 8, last line, "86" should read --82--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Meistrick et al. (U.S. Patent 4,706,624).

Re claims 1, 2, 9, 13, 14, and 19, Meistrick et al. disclose a compression release retarder comprising:

- an engine head 12 with valve cylinders (column 4, lines 4-10);

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- a master piston 60 in master cylinder 46 forming a chamber and lightly biased in an upwardly direction (away from rocker arm 66) by a leaf spring 62 (column 4, lines 49-52 and Figure 1);

- a slave piston 48 in slave cylinder 42 biased upward away from engine valves by compression spring 50 (column 4, lines 41-44 and Figure 1);

- fluid passageways 40, 44 connecting the master piston 60 and slave piston 48, and when filled, the resulting motion of pushtube 68 on master piston 60 causes corresponding downward motion of slave piston 48 to open exhaust valves 76 (column 5, lines 32-41 and Figure 1);

- a fuel injector cam driving pushtube 68 and rocker arm 66 to move master piston 60 and correspondingly slave piston 48 (column 4, lines 52-58) for a predetermined distance to take up lash and actuate exhaust valves (column 5, lines 40-51).

Re claims 3, 4, and 15, Meistrick et al. disclose a compression release retarder with a fuel pump and fuel pump switch 86 for fuel supply to the system (column 5, lines 25-27), and a three-position solenoid valve 16 and a control valve 24 for controlling the fluid provided to the system (column 4, lines 10-14, lines 24-30, and Figure 1).

Re claim 5, Meistrick et al. disclose a ball check valve 34 between the solenoid valve 16 and the fluid lines to the master piston 60 to prevent reverse fluid flow (column 5, lines 34-40 and Figure 1).

Re claims 6, 7, 12, and 16, Meistrick et al. disclose drain passageways 18 and 20 controlled by solenoid valve 16 to return fluid to the engine sump (tank) (column 4, lines 20-23).

Re claims 8, 10, and 17, Meistrick et al. disclose an adjusting screw 52 locked into an adjusted position by lock nut 54 (column 4, lines 44-46).

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Re claims 11 and 20, Meistrick et al. disclose opening the exhaust valve at maximum near or just after top-dead-center of the compression stroke (column 5, lines 50-55 and Figures 2A and 2B).

Re claim 18, Meistrick et al. disclose a pair of engine valves 76 actuated by a bridge or crosshead 70 and slave piston 48, the exhaust valves 76 normally being actuated by rocker arm 80 (column 4, lines 63-68 with column 5, lines 1-7 and Figure 1).

5. Claims 1, 3-13, 15-20 are further rejected under 35 U.S.C. 102(b) as being anticipated by Johnson (U.S. Patent 4,384,558).

Johnson discloses an engine compression brake comprising:

Re claims 1, 9, 13, and 19, Johnson discloses a compression brake comprising:

- a master piston 46 in cavity 50 communicating with fluid cavity 14 through passage 52 (column 5, lines 13-17 and Figure 1);
- a slave or actuating piston 12 in fluid cavity 14 biased upward away from engine valves by a compression spring arrangement (column 4, lines 13-19 and Figure 1);
- fluid passageways 40, 52 connecting the master piston 46 and slave piston 12, and when filled, the resulting motion of injector train portion 48 on master piston 46 causes corresponding downward motion of slave piston 12 to open exhaust valves 2, 4 (column 5, lines 19-39 and Figure 1);
- a cam operated fuel injector train to operate the exhaust rocker lever 6 and the master piston 46 for the braking mode (column 3, lines 44-47, lines 55-58) for corresponding movement of slave piston 12 (column 5, lines 19-24) for a predetermined distance to take up lash and actuate exhaust valves (column 6, lines 5-22).

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Re claims 3, 4, and 15, Johnson discloses a compression brake with a fuel pump 22 for providing fuel pressure to the system and a three-way solenoid valve 24 for fluid control means 18 (column 4, lines 29-36, and Figure 1).

Re claim 5, Johnson discloses a check valve 44 between the solenoid valve 24 and the fluid lines to the master piston 46 to prevent reverse fluid flow (column 5, lines 7-10 and Figure 1).

Re claims 6, 7, 12, and 16, Johnson discloses supply passage 36 with drainage to the sump 20 (tank) controlled by solenoid valve 24 (column 4, lines 56-60) and fluid pressure provided to cavity 14 returned to sump 20 also through the control of solenoid valve 24 (column 4, lines 33-36).

Re claims 8, 10, and 17, Johnson discloses a lash take-up means 58 to adjust the lash between piston 12 surface 54 and valve opening surface 56 (column 6, lines 5-10).

Re claims 11 and 20, Johnson discloses opening the exhaust valves for braking purposes near the end of the compression stroke (column 3, lines 61-66).

Re claim 18, Johnson discloses a pair of exhaust valves 2, 4 actuated by a bridge or crosshead tee 8 and slave piston 12 (column 5, lines 20-24), the exhaust valves 2, 4 normally being actuated by rocker lever 6 (column 3, lines 66-68 with column 4, lines 1-2 and Figure 1).

Conclusion

6. The IDS (PTO-1449) filed on 2 July 2003 has been considered. An initialized copy is attached hereto.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of 3 patents.

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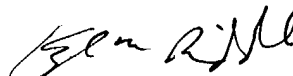
- Meistrick et al. (U.S. Patent 4,706,625) disclose an engine retarder similar to above.
- Hu (U.S. Patent 5,201,290) discloses a compression relief engine retarder with an improved clip valve assembly.
- Meneely (U.S. Patent 5,645,031) discloses a compression release brake with hydraulically adjustable timing.

Communication

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyle M. Riddle whose telephone number is (703) 306-3409. The examiner can normally be reached on M-F (07:30-5:00) Second Friday Off.

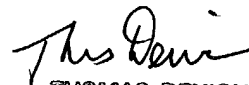
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (703) 308-2623. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kyle M. Riddle
Examiner
Art Unit 3748

kmr



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